

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017485**Date Inspected:** 18-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	William Sherwood and Mike Johnson			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	Orthotropic Box Girder		

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 6W/7W side plate 'C' (1000mm to 3300mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove welding fill pass to cover pass on the splice butt joint. The welder was observed perform automatic welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1. The joint being welded had a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. At the end of the shift, cover pass welding on the splice butt joint was completed and the welder should be moving to new location at 0mm to 1000mm tomorrow and manually weld the area due to limited access of the Bug-o track nozzle holder.

At OBG 7W/8W edge plate 'B' outside, QA randomly observed ABF/JV qualified welder Jin Pei Wang ID #7299 continuing to perform cover pass welding on the Complete Joint Penetration (CJP) splice butt joint. The welder was observed manually welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with copper backing bar.

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During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. Before the end of the shift, SMAW cover pass welding was completed and the welder started flush grinding the weld cover as required. Flush grinding of the weld cover reinforcement was also completed and the welder has moved to the top deck A1 of the same OBG. The welder was observed SMAW welding fill pass to cover pass on the six inches long corner tie in of top deck 'A1' plate to edge plate 'B' outside. Cover pass welding of the weld reinforcement was also completed but flush grinding of the weld cover was still ongoing which should continue until tomorrow.

At OBG 7W/8W edge plate 'F' outside, QA randomly observed ABF/JV qualified welder James Zhen ID #6001 continuing to perform cover pass welding on the Complete Joint Penetration (CJP) splice butt joint. The welder was observed manually welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with copper backing bar. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. QA randomly monitored the welding parameter with reading of 130 amperes which appears in conformance to the contract requirements. Before the end of the shift, SMAW cover pass welding was completed and the welder started flush grinding the weld cover as required. Flush grinding of the weld cover reinforcement was also completed and the welder has moved to the top deck A5 of the same OBG. The welder was observed SMAW welding fill pass to cover pass on the six inches long corner tie in of top deck 'A5' plate to edge plate 'F' outside. Cover pass welding of the weld reinforcement and flush grinding of the weld cover were also completed.

QA randomly observed ABF/JV qualified welders Rory Hogan (ID #3186) and Jeremy Dolman (ID #5042) perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) 6E/7E bottom plate 'D1' outside. The welder was observed welding in the 4G (overhead) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4. The welder was using a track mounted welder holder assembly that was remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The gouged and ground splice butt joint was also Non Destructive Testing (NDT) tested using the Magnetic Particle Testing (MT). The splice joint was preheated to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and maintained the preheat by moving the heater blankets to the side of the plate during welding. The vicinity was also properly protected from wind and other climatic changes. During welding, ABF Quality Control (QC) Mike Johnson was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass welding was still continuing and should remain tomorrow.

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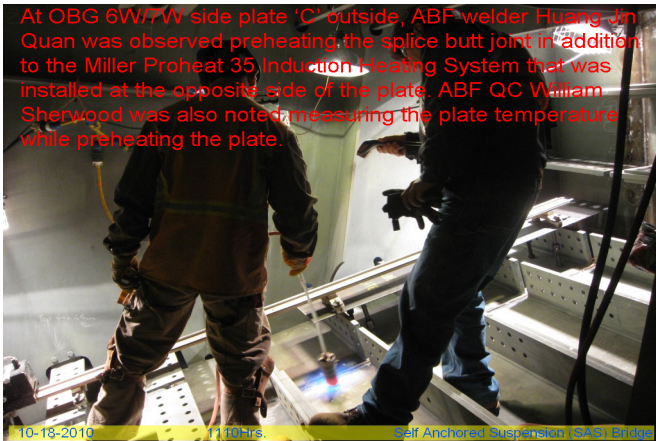
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At OBG 7W/8W top deck plate 'A5' outside, ABF welder was observed Shielded Arc Metal Welding (SMAW) welding fill pass on the south end (150mm long) of the top deck splice joint. The welder was also noted tying in the top deck splice joint into the edge plate 'F' splice joint.



At OBG 7W/6W top deck plate 'A1' outside, ABF welder was observed Shielded Arc Metal Welding (SMAW) welding fill pass on the north end (150mm long) of the top deck splice joint. The welder was also noted tying in the top deck splice joint into the edge plate 'B' splice joint.

At OBG 6W/7W side plate 'C' outside, ABF welder Huang Jin Quan was observed preheating the splice butt joint in addition to the Miller Proheat 35 Induction Heating System that was installed at the opposite side of the plate. ABF QC William Sherwood was also noted measuring the plate temperature while preheating the plate.



Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer